ABSTRACT OF THE INVENTION

A capture detection algorithm in which atrial capture is detected and distinguished. Further, an immediate measurement of the capture threshold is implemented when a pacemaker switches a lead's polarity from bipolar to unipolar in response to a detected lead failure, in either one or both chambers. Atrial chamber reset (ACR) and AV conduction (AVC), implemented to measure an atrial pacing threshold, are comparatively measured to enable measurement of the atrial pacing threshold. The data that is used to choose between ACR and AVC methods is used to determine the progression of the patient's disease state. Some of the significant aspects of the invention include enablement of accurate threshold measurements, including calculation of stability criteria, precise interval measurements and the use of reference interval to determine capture and loss of capture.